AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

Claims 1-49 (Canceled)

Claim 50 (Currently Amended)   An improved port control module for use in a fibre channel switching fabric comprising:

a fibre channel input/output port for connection to a link;

an encoder/decoder in communication with the input/output port; and

a buffer;

the improvement comprising the inclusion of buffer overrun prevention logic between the encoder/decoder and the buffer, the buffer overrun prevention logic tagging, but not terminating, words that overrun the buffer, wherein the buffer overrun prevention logic

(i) sets tag bits to a unique value indicative of an overrun condition, and

(ii) operates on the tag bits and not the data bits.

Claim 51 (Previously Presented)   The improved port control module for use in a fibre channel switching fabric of claim 50 wherein the buffer is a first-in, first-out buffer.

Claim 52 (Cancelled)

Claim 53 (Currently Amended)   A method for control of an input buffer, where the input buffer is adapted to receive a stream of data at a rate which is not subject to control by the buffer, comprising the steps of:

receiving fibre channel data;

placing the data in the buffer;

monitoring for an overflow condition;

and if an overflow condition is detected, including a detectable signal in association with the data, including providing tag bits set to a unique value indicative of an overrun condition, but not terminating, data that overruns the buffer, and operating on the tag bits and not the data; and

providing the data from the buffer and the detectable signal to subsequent devices.

Claim 54 (Canceled)

Claims 55-65 (Canceled)

Claim 66 (Withdrawn)   An interconnect system having a plurality of ports transferring received Fibre Channel frames between multiple attached devices comprising,

a first port control module supporting a first link speed,

a second port control module supporting a second link speed, the second link speed different from the first port link speed,

a third port control module supporting a third link speed, the third link speed

is the same as either the first port control module link speed or the second port control

module link speed,

a connectivity apparatus coupled to each port control module, affecting the

transfer of frames between any two ports,

the connectivity apparatus supporting a fixed frame transfer rate, the same for

each frame transferred between any two ports.

Claim 67 (Withdrawn)   The interconnect system of Claim 56 wherein the fixed

frame transfer rate includes a fixed number of active data signals for all data transfers.

Claim 68. (Withdrawn)   The interconnect system of Claim 56 wherein the path

or number of data signals connecting any two port control modules over the connectivity

apparatus during a frame transfer is fixed and does not change.

Claim 69 (Withdrawn)   The interconnect system of Claim 58 wherein the

connectivity apparatus is clocked at the same frequency for every frame.

Claim 70 (Withdrawn)   An interconnect system having a plurality of ports for

routing received Fibre Channel frames between multiple attached devices comprising,

a first port control module supporting a first link speed,

a second port control module supporting a second link speed, the second link

speed different from the first port link speed,

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a third port control module supporting a third link speed, the third link speed is the same as either the first port control module link speed or the second port control module link speed,

a connectivity apparatus coupled to the first port and the second port for selective interconnection there-between,

the connectivity apparatus transferring frames using a constant number of data signals and a constant clock rate, having the same values between any two ports.

Claim 71 (Withdrawn)   A method for sending Fibre Channel frames between ports in a switch, the method comprising the steps of:

receiving an incoming frame at a first Fibre Channel port at a first link speed,

determining the destination port to route the first Fibre Channel frame,

the destination port's link speed being different from the first Fibre Channel port,

transferring the Fibre Channel frame from the first port to the destination port through a connectivity apparatus coupled to the first and the destination ports,

the connectivity apparatus transferring the frame at a fixed throughput that does not change with the link speed.

Claim 72 (Withdrawn)   The interconnect system of Claim 61 wherein the fixed throughput applied to the frames is the same value.

Claim 73 (Withdrawn)   A method for sending frames between a Fibre Channel network at one speed and a Gigabit Ethernet network at another speed, the method comprising the steps of:

receiving an incoming frame at a first Fibre Channel port at a first speed,

determining the destination port to route the first Fibre Channel frame,

the destination port comprising a Gigabit Ethernet network,

transferring the Fibre Channel frame from the first port to a protocol conversion module through a connectivity apparatus, the connectivity apparatus transferring all frames using a constant number of data signals and a constant clock rate,

converting the Fibre Channel frame to a frame format compatible to being transmitted on a Gigabit Ethernet network,

transmitting the frame out the Gigabit Ethernet port.